

In the Claims

Please cancel claims 2-46, and add claims 47-95 as follows:

47. A data visualisation system comprising:
- a data value memory in which is maintained a finite set of data values; and
- a display arranged to display a contoured representation wherein one or more of the data values are displayed as contours around one or more data points, each data value centred on a data point.
48. A data visualisation system as claimed in claim 47 further comprising a memory in which is maintained an interaction database of interaction data representing interactions between customers and merchants; and a retrieval device arranged to retrieve from the interaction database data representing interactions between customers and merchants, to construct the finite set of data values from the retrieved data and to store the data values in the data value memory.
49. A data visualisation system as claimed in claim 48 wherein the display is further arranged to display a graphical representation of at least one merchant and to superimpose the contoured representation of the data values on the graphical representation of the merchant.
50. A data visualisation system as claimed in claim 49 wherein the merchant operates from one or more commercial premises, the display further arranged to display a graphical spatial representation of the premises of the merchant.

51. A data visualisation system as claimed in claim 50 wherein the merchant sells a range of products to customers, each product having a product code, the interaction data comprising a product code for each interaction.

52. A data visualisation system as claimed in claim 50 wherein the merchant operates a casino or gaming venue comprising one or more stations, each station having a station identifier, the interaction data comprising a station identifier for each interaction.

53. A data visualisation system as claimed in claim 50 wherein the merchant comprises a wagering or betting service provider, the interaction data comprising a merchant identifier and a monetary value for each interaction.

54. A data visualisation system as claimed in claim 50 wherein the merchant comprises a financial or insurance services provider comprising one or more business units, each business unit having a business unit identifier, the interaction data comprising a business unit identifier for each interaction.

55. A data visualisation system as claimed in claim 50 wherein the merchant provides reservation of products or services, the interaction data comprising a merchant identifier and the time of the interaction for each interaction.

56. A data visualisation system as claimed in claim 49 wherein the merchant operates a manufacturing facility, the display further arranged to display a graphical representation comprising a representation of a manufacturing process of the merchant.

57. A data visualisation system as claimed in claim 56 wherein the manufacturing process comprises one or more manufacturing stages, each stage having a stage identifier, the interaction data comprising a stage identifier for each interaction.

58. A data visualisation system as claimed in claim 49 wherein the merchant comprises a telecommunications service provider operating a telecommunications network, the display further arranged to display a graphical spatial representation of a network or part of a network operated by a merchant.

59. A data visualisation system as claimed in claim 49 wherein the merchant operates from one or more web sites which are accessed by customers over a computer network, the display further arranged to display a graphical representation comprising a graphical web site map of a merchant.

60. A data visualisation system as claimed in claim 58 wherein the display is further arranged to display a topological map showing the origin of customers in merchant customer interactions.

61. A data visualisation system as claimed in claim 47 further comprising a memory in which is maintained a sports database of data representing one or more sports events; and a retrieval device arranged to retrieve from the sports database data representing a sports event, to construct the finite set of data values from the retrieved data and to store the data values in the data value memory.

62. A data visualisation system as claimed in claim 61 wherein the display is further arranged to display a graphical representation of a sports venue at which the sports event is held and to superimpose the contoured representation of the data values on the graphical representation of the sports venue.

63. A method of data visualisation comprising the steps of:
maintaining in a data value memory a finite set of data values; and
displaying a contoured representation wherein one or more of the data values are displayed as contours around one or more data points, each data value centred on a data point.

64. A method of data visualisation as claimed in claim 63 further comprising the steps of maintaining in a memory an interaction database of interaction data representing interactions between customers and merchants; retrieving from the interaction database data representing interactions between customers and merchants; constructing the finite set of data values from the retrieved data; and storing the data values in the data value memory.

65. A method of data visualisation as claimed in claim 64 further comprising the steps of displaying a graphical representation of at least one merchant and superimposing the contoured representation of the data values on the graphical representation of the merchant.

66. A method of data visualisation as claimed in claim 68 wherein the merchant operates from one or more commercial premises, the method further comprising the step of displaying a graphical spatial representation of the premises of the merchant.

67. A method of data visualisation as claimed in claim 66 wherein the merchant sells a range of products to customers, each product having a product code, the method further comprising the steps of maintaining a product code for each interaction in the interaction data.

68. A method of data visualisation as claimed in claim 66 wherein the merchant operates a casino or gaming venue comprising one or more stations, each station having a station identifier, the method further comprising the steps of maintaining a station identifier for each interaction in the interaction data.

69. A method of data visualisation as claimed in claim 66 wherein the merchant comprises a wagering or betting service provider, the method further comprising the steps of maintaining a merchant identifier and a monetary value for each interaction in the interaction data.

70. A method of data visualisation as claimed in claim 66 wherein the merchant comprises a financial or insurance services provider comprising one or more business units, each business unit having a business unit identifier, the method further comprising the steps of maintaining a business unit identifier for each interaction in the interaction data.

74. A method of data visualisation as claimed in claim 66 wherein the merchant provides reservation of products or services, the method further comprising the steps of maintaining a merchant identifier and the time of the interaction for each interaction in the interaction data.

72. A method of data visualisation as claimed in claim 65 wherein the merchant operates a manufacturing facility, the display further arranged to display a graphical representation comprising a representation of a manufacturing process of the merchant.

73. A method of data visualisation as claimed in claim 72 wherein the manufacturing process comprises one or more manufacturing stages, each stage having a stage identifier, the method further comprising the steps of maintaining a stage identifier for each interaction in the interaction data.

74. A method of data visualisation as claimed in claim 65 wherein the merchant comprises a telecommunications service provider operating a telecommunications network, the display further arranged to display a graphical spatial representation of a network or part of a network operated by a merchant.

75. A method of data visualisation as claimed in claim 65 wherein the merchant operates from one or more web sites which are accessed by customers over a computer network, the display further arranged to display a graphical representation comprising a graphical web site map of a merchant.

76. A method of data visualisation as claimed in claim 64 wherein the display means is further arranged to display a topological map showing the origin of customers in merchant customer interactions.

77. A method of data visualisation as claimed in claim 63 further comprising the steps of maintaining in a memory a sports database of data representing one or more sports events; retrieving from the sports database data representing a sports event; constructing the finite set of data values from the retrieved data; and storing the data values in the data value memory.

78. A method of data visualisation as claimed in claim 77 further comprising the steps of displaying a graphical representation of a sports venue at which the sports event is held; and superimposing the contoured representation of the data values on the graphical representation of the sports venue.

79. A data visualisation computer program comprising:
a finite set of data values maintained in a data value memory; and

a display arranged to display a contoured representation wherein one or more of the data values are displayed as contours around one or more data points, each data value centred on a data point.

80. A data visualisation computer program as claimed in claim 75 further comprising an interaction database of interaction data representing interactions between customers and merchants maintained in a memory; and a retrieval device arranged to retrieve from the interaction database data representing interactions between customers and merchants, to construct the finite set of data values from the retrieved data and to store the data values in the data value memory.

81. A data visualisation computer program as claimed in claim 80 wherein the display is further arranged to display a graphical representation of at least one merchant and to superimpose the contoured representation of the data values on the graphical representation of the merchant.

82. A data visualisation computer program as claimed in claim 81 wherein the merchant operates from one or more commercial premises, the display further arranged to display a graphical spatial representation of the premises of the merchant.

83. A data visualisation computer program as claimed in claim 82 wherein the merchant sells a range of products to customers, each product having a product code, the interaction data comprising a product code for each interaction.

84. A data visualisation computer program as claimed in claim 82 wherein the merchant operates a casino or gaming venue comprising one or more stations, each station having a station identifier, the interaction data comprising a station identifier for each interaction.

85. A data visualisation computer program as claimed in claim 82 wherein the merchant comprises a wagering or betting service provider, the interaction data comprising a merchant identifier and a monetary value for each interaction.

86. A data visualisation computer program as claimed in claim 82 wherein the merchant comprises a financial or insurance service provider comprising one or more business units, each business unit having a business unit identifier, the interaction data comprising a business unit identifier for each interaction.

87. A data visualisation computer program as claimed in claim 82 wherein the merchant provides reservation of products or services, the interaction data comprising a merchant identifier and the time of the interaction for each interaction.

88. A data visualisation computer program as claimed in claim 81 wherein the merchant operates a manufacturing facility, the display further arranged to display a graphical representation comprising a representation of a manufacturing process of the merchant.

89. A data visualisation computer program as claimed in claim 88 wherein the manufacturing process comprises one or more manufacturing stages, each stage having a stage identifier, the interaction data comprising a stage identifier for each interaction.

930 A data visualisation computer program as claimed in claim 81 wherein the merchant comprises a telecommunications service provider operating a telecommunications network, the display further arranged to display a graphical spatial representation of a network or part of a network operated by a merchant.

91. A data visualisation computer program as claimed in claim 81 wherein the merchant operates from one or more web sites which are accessed by customers over a computer network, the display further arranged to display a graphical representation comprising a graphical web site map of a merchant.

92. A data visualisation computer program as claimed in claim 80 wherein the display is further arranged to display a topological map showing the origin of customers in merchant customer interactions.

93. A data visualisation computer program as claimed in claim 79 further comprising a sports database of data representing one or more sports events maintained in a memory; and a retrieval device